



MOOSE MANAGEMENT 2000-2015

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FROM PUBLIC PLANNING TO ACTION



- What does the public want?
 - What is the status of moose (#, trend, health)?
 - What do we need to know about moose?
 - How do we collect that information?
 - How do we apply this to manage moose for the public?

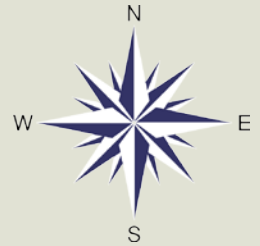
GOALS: MOOSE



GOALS:

RECREATION
COMPROMISE
ROAD SAFETY

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- MAXIMIZE HUNTING
 - MAXIMIZE HUNTING + VIEWING...MAINTAIN BULLS
 - BALANCE MOOSE/VEHICLE...+ MAX HUNT + VIEW + BULLS
 - BALANCE MOOSE VS. VEHICLE ...W/HUNTING
 - REDUCE MOOSE VS. VEHICLE

OBJECTIVES: MOOSE



OBJECTIVES:

RECREATION: (NW)

**By 2010, Moose at 55-65%
Carrying Capacity, maintain
17% Bulls**

COMPROMISE: (E, Central)

**By 2005, Reduce pop'n (2000)
by 1/3rd, maintain 17% Bulls**

ROAD SAFETY: (South)

By 2005, Reduce pop'n (2000) by 1/3rd

**Reduce pop'n to extent necessary to minimize danger
to motorists**

TRANSLATE PUBLIC WANTS MANAGEMENT



- X number of moose in each area
- Certain level of mature bulls

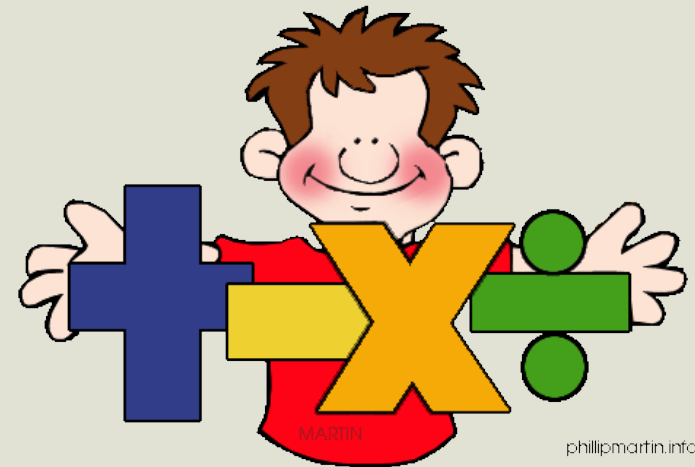


TO UNDERSTAND THIS...

COLLECT INFORMATION/FIGURE OUT



- How many moose?
- Number of Bulls, cows, and calves?
- How many are produced each year (productivity)?
- How many we lose each year (Survival/mortality)?



4 KEY MANAGEMENT ELEMENTS



**DENSITY
COMPOSITION
PRODUCTIVITY
SURVIVAL**



AERIAL SURVEYS: Abundance/Density



POPULATION STRUCTURE (B:C:c)



MOOSE PRODUCTIVITY



MOOSE SURVIVAL: RATE AND CAUSE OF MORTALITY



MOOSE SURVIVAL STUDY 2014–2020



Project goals and objectives:

- Determine annual rates of adult cow and calf survival
- Determine age specific cause of mortality
- Establish “normal” values for moose health
- Assess winter tick impacts



MOOSE SURVIVAL



- 3 Study areas in collaboration with New Hampshire:
 - Coos County, NH
 - Western Mountains/Moosehead Region (WMD 8; lat. 45.62)
 - Fish River Drainage (WMD 2; lat. 46.97)
 - $1^{\circ} = \sim 68$ miles
- Conduct “Walk-ins” on Cow-calves to determine survival (UNH)



GPS COLLARS

- Email mortality detections
 - Recover moose 24–36 hrs for necropsy
- Assess movement and habitat use
- Track adult cows, clustering for calving



AERIAL CAPTURE



For each study area:

- 35 Adults (yearling and older)
- 35 calves
- *Currently 147 moose*

Collect:

- Weigh calves
- Blood
- Fecals
- Winter tick count
- Hair
- Photo
- Collar



NECROPSY PROTOCOL



- Recover and assess environment
- Assess external injuries
- Weigh calves
- Winter tick count
- Blood collection
- Tissue/organ sampling
- Remove to lab: head/heart/lungs abnormalities



MOOSE



- MOOSE MANAGEMENT SYSTEM

- PUBLIC GOALS AND OBJECTIVES

- COLLECT DATA

- ANALYZE

- ANNUAL HARVEST --- PERMIT ALLOCATIONS

- PUBLIC INPUT

- REPEAT



QUESTIONS

